ABSTRACT
                One of a series of papers resulting from a Fund for
the Improvement of Postsecondary Education (FIPSE) project, this
working paper describes how a state agency data system can be used
and supplemented to produce the kinds of data that are needed for
effective community college planning and evaluation. First, general
information is presented on efforts to design, develop, and add a
planning and evaluation component to the existing California State
Chancellor's Information System. This section provides information on
the current system and three specific information sets to be produced
(i.e., quantitiative, qualitative, and external). Next, six areas in
which the FIPSE project is working to create analytical models are
discussed: (1) learner outcomes, including proposals to add partial
longitudinal capability to the existing student data file and the use
of cross-section community surveys assessing the value of community
college education; (2) comparative data for college evaluation and
accreditation; (3) projected needs and programs; (4) statewide
priorities for community college operations against which evaluations
and planning can be conducted; (5) census data application to the
evaluation of statewide priorities, comparative analyses by colleges,
and projections of student demand; and (6) other data sources, such
as the Statewide Longitudinal Survey, the Student Resources Surveys,
and the Student Economics and Resources Survey. An information system
plan proposed to the Board of Governors of the California Community
Colleges is appended. (HB)

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Other Reports and Papers:

o   College Planning: Strategies for Staff
    Assessment of the Environment

o   Census Users Manual

o   Report on Learner Outcomes Symposium

o   Working Papers on the FIPSE Project:

        #4   Delineation of Responsibilities
    #5,6,7   Planning and Accreditation: A
             Survey of Attitudes of Policy-
             makers
        #9   Evaluating Statewide Priorities
       #10   Measuring Community College Uutcomes:
             The State-of-the-Art

from the project on

    Improving Community College Evaluation and Planning

jointly sponsored by the

    Chancellor's Office, California Community Colleges
                            and
    Western Association Accrediting Commission for Community
    and Junior Colleges

and partly supported by a grant from the federal Fund for Improvement of
Postsecondary Education.

WORKING PAPER NO. EIGHT

INFORMATION SYSTEM SUPPORT

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INFORMATION SYSTEM SUPPORT

PREFACE

This working paper on Information Systems Support is one of a series of papers resulting from a three-year project to improve evaluation and planning in community colleges. The project is sponsored jointly by the Chancellor's Office of the California Community Colleges and by the Western Association Accrediting Commission for Community and Junior Colleges. Project work is concentrated in California and Hawaii, the jurisdiction of the Western Accrediting Commission. Support for the project is provided by community colleges in these states, the two sponsoring aggencies, and by the federal Fund for Improvement of Postsecondary Education (FIPSE).

Project objectives include developing a clear statement of the responsibilities for evaluation and planning that are appropriate for state control agencies, accrediting commissions, and for local community colleges. Tensions about the appropriate division of these responsibilities exist throughout the country. A long tradition of cooperation in California and Hawaii, however, has created a most congenial atmosphere in which to analyze and clarify the proper delineation of roles.

Project staff also are developing a series of tools to improve the state-of-the art of evaluation and planning for community colleges. Beginning in the Fall 1982, these tools have been introduced, used and assessed in a dozen workshops, self-study seminars, symposia, and problem-solving sessions conducted in California and Hawaii. These activities will continue through the Fall of 1984. While project work is being concentrated in the two states, it should be possible to generalize the results to virtually any community college operation or governance structure in the country.

This working paper was written early in the project to describe how a state agency data system (in this case, California) can be used and supplemented to improve planning and evaluation for community colleges. Most such data systems are large-scale and cross-section in character. While possibly useful for policy analysis, these data do not automatically generate the kinds of comparative data, projections, longitudinal data, and qualitative assessments that are needed for effective planning and evaluation.

Several approaches to developing useful information are suggested: first, using existing data for comparative analysis; second, gathering new information, often qualitative, from the colleges; and, finally, collecting relevant information from sources external to the college. To accomplish this work, six specific project efforts have been identified and undertaken. These efforts have resulted in a series of activities and products that are contributing in a significant way to one of the project's major objectives: to provide better information in a coordinated way so as to reduce college costs. Specific results are described in other project papers and reports.

The reader will note that we, the project staff, have other responsibilities. Consequently, were it not for the help and assistance of countless others in both Hawaii and California, this effort would be impossible. Unfortunately, space does not permit us to list all these individuals. However, we do want to thank Evelyn Stacey of the state Chancellor's Office and Rich Montori of Monterey Peninsula College for their excellent work, respectively, in typing the manuscript and in preparing the art and printing for this document.

...ecially appreciate the support from FIPSE. Receipt of the Fund's grant
...in motion a series of commitments on the part of others whose support
...ney and in kind) is essential to the successful completion of this
...ct and the implementation of its results.

Chuck McIntyre
Project Director

Director,
Analytical Studies Unit
State Chancellor's Office
California Community
  Colleges

Robert Swenson
Project Co-Director

Executive Director
Western Accrediting
  Commission for
  Community and
  Junior Colleges

Dale Tillery
Principal Project Consultant

Professor Emeritus,
School of Education
University of California,
  Berkeley

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INFORMATION SYSTEM SUPPORT

GENERAL

As part of the FIPSE Project, a planning and evaluation component is to be designed, developed, and added to the existing California State Chancellor's Information System. This new information component will serve a variety of purposes and users at both the state and local levels.

The existing state Chancellor's Office Information System collects cross-section data from local community colleges on programs, students, staff, facilities, courses and finance. (See the Appendix for a description of this information system and changes being undertaken in conjunction with the FIPSE Project.) While these data are useful for policy analysis, the system does not automatically generate the kinds of comparative data, projections, longitudinal data, and qualitative assessments that are needed for planning and evaluation. This part of the FIPSE Project will identify cost-effective ways of developing such information for use by local colleges, the Accrediting Commission, and the state Chancellor's Office. An information subsystem and three specific sets of information are to be produced.

The first information set includes those data (primarily quantitative) that currently are gathered and reported to the state by the colleges and districts. These data, in their detailed form, may be used for comparative analyses in institutional self-study and accreditation review. These same data, in more aggregate form, can be used by the state Office in its planning and evaluation work.

A second information set are those data that can be produced and gathered by the college but currently are not reported to the state. These data would serve the same purposes as those in the first set, but would, in many cases, be qualitative, rather than quantitative.

The third information set are those data gathered and constructed largely external to the college: planning projections, community data (needs assessments, census data, etc.), and longitudinal studies.

Coordinated development of dual purpose information should result in significant cost savings to colleges. New analytical models should significantly improve planning and evaluation capabilities particularly for areas like comparative analysis and evaluation of statewide priorities.

To date, six specific FIPSE information efforts have been identified and work is underway on each. These efforts, described below, are:

       (1)   learner outcomes,
       (2)   comparative data,
       (3)   projected needs and programs,
       (4)   statewide priorities,

(5) census data, and
(6) other data sources.

LEARNER OUTCOMES

Initial work on the FIPSE Project reveals a dearth of specific, useable
information on learner outcomes that can be applied to community college
planning and evaluation.

In concept, the output or outcomes from community college education can be
categorized as current private and public consumption benefits together with
long-term private and public investment benefits. These categories, often
expressed in terms of additional lifetime earnings and certain societal or
collective benefits, are the results of value added to human capital (students)
by community college instruction and related "support" services. This added
value can be assessed during the student's enrollment by measuring the change
(from initial enrollment to completion) in both cognitive and affective
attributes of the student.

These internal measures of impact, however, are incomplete. It is also
necessary to see if the added value has the impact on the individual and
society that is expected. A complete assessment of learner outcomes requires
followup study of the effects of education after learners have completed their
work. For instance, a community college may be quite good (technically or
internally efficient) at preparing paraprofessional medical workers, but not
economically efficient because few of the program's graduates find employment.
Analogies can be drawn for other community college functions; i.e., transfer,
developmental, and community education.

Faced with the need for both internal and external measures, researchers often
advocate longitudinal studies where students are individually tracked over long
periods. A number of such studies have been successfully completed. However,
these studies are costly and the results have not always been timely for either
policymaking or planning. Results are seldom used to evaluate different
instructional strategies or to evaluate the results of similar programs at
different institutions. Degree achievement is often the major performance
measure. The multitude of objectives sought by community college students
requires a more complex set of performance measures.

To address these practical problems and the gaps in both internal and external
measures, we propose to explore

(a) adding partial longitudinal capability to the existing student
     data file (Chancellor's Office Information System) by (1) shifting
     to term-end, rather than 4th week census and annual, reporting and
     (2) using a unique identifier for each individual student while
     enrolled; and

(b) the use of cross-section community surveys which assess in
     retrospect, the subsequent value of community college education
     for those who have (haven't) attended a college.

These two approaches, taken together, should be far less costly than a complete
longitudinal study.

Approach (a) will require resolution of record privacy problems by the state

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Chancellor's Office, an additional annual cost for data processing for the Office, and some one-time start-up costs for community college districts. After the start-up, this approach should be less costly for districts over the long-term than would certain existing annual student data reporting procedures being tested by the Chancellor's Office.

Approach (a) will be funded from existing state and local resources. We propose to fund approach (b) from the FIPSE Project by redirecting and augmenting funds in the project budget.

Approach (b) will involve four related activities:

ACTIVITY	TIMING
STATE-OF-THE-ART PAPER	
This paper will assess the literature and existing efforts (such as the Kellogg-NCHEMS project) on those survey techniques, questions, and strategies most applicable to the measurement of community college learner outcomes. The product is a discussion paper to serve as background for a symposium (see below) and subsequent efforts.	June, July, August, 1982
SYMPOSIUM	
This will be a several-day session in which a small group of leading experts from across the country will discuss survey techniques, questions, and strategies most applicable to measurement of community college learner outcomes. Symposium proceedings will be made available. The ideas generated will be used as the basis for subsequent project efforts in dealing with learner outcomes.	November, 1982
DESIGN INSTRUMENT	
This effort involves the development of survey questions designed to identify and measure the outcomes of community college education. Questions will be designed with a variety of survey approaches in mind.	February, 1983 to December, 1983
TEST INSTRUMENT	
The above survey instrument will be tested by four community colleges that will be doing their accreditation self-studies during 1983-84. One or more of these tests will utilize community survey techniques developed in a Needs Assessment project completed by the Chancellor's Office in 1980 with the support of Vocational Education Act funds. Evaluation of these tests will facilitate modification of the survey instrument and identification of useful survey techniques for on-going uses by colleges, beginning in 1984.	November, 1983 to July, 1984

Results of the State-of-the-Art paper and the symposium will be disseminated to

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community college personnel throughout California and Hawaii in a series of workshops during the Spring 1983. Results of all four activities will be disseminated in California, Hawaii, and through the country during 1984.

COMPARATIVE DATA

The existing Chancellor's Office Information System contains extensive cross-section data in unit record form on students, staff, facilities, programs, and courses along with more aggregate data on finance, institutional profiles, and communities (within districts).

These existing cross-section data, along with other information, can be used on a comparative basis for the conduct of studies that emphasize evaluation and planning. Comparative data, on like practices in similar colleges, provide useful indices that assist in accreditation self-studies and other college evaluations. A consultant with local self-study experience will develop an analytical model that identifies the ways in which existing data can be used to assess college performance (as compared to other colleges) with regard to elements of the ten accrediting standards as well as other relevant indices.

Suggested uses in relation to accrediting standards are shown below:

Standard 1 - Goals and Objectives

1. Compare 1980 census demographic and economic data on the college service area with regional and statewide data to identify trends or potential changes and their implications for college planning.
2. Compare district labor market data with regional and statewide information to determine impact on college objectives.
3. Compare enrollment patterns and student demographics with those of colleges which have service areas with similar demographic and economic characteristics to determine the implications for planning.

Standard 2 - Educational Programs

1. Compare numbers of transfer students and their achievements with those of colleges which have similar service areas.
2. Compare data on teaching load by discipline with similar-type colleges, and with regional and statewide load data.
3. Compare student retention rates with other colleges.
4. Compare data on job placements of students from the college vocational programs with other colleges.
5. Compare types of course offerings and enrollment data with similar colleges.

Standard 3 - Institutional Staff

1. Compare staffing patterns with similar colleges, and with regional and statewide patterns.
2. Compare compensation practices with other colleges.
3. Compare staff demographics with other colleges.
4. Compare budget allocations for professional growth activities.

Standard 4 - Student Services

1. Compare counselor to student ratios with other colleges.
2. Compare data on financial aid recipients with those of colleges which have similar population demographics.
3. Compare data on special groups with those of similar colleges to identify potential need for new services.
4. Compare ethnic data on students and staff with other colleges, and with data on the college service area.
5. Compare retention and achievements of EOPS students.

Standard 5 - Community Services

1. Compare data on community attitudes and participation with those of similar colleges.
2. Compare programs, enrollments and charges in community service classes.
3. Compare staffing and budget for community services.

Standard 6 - Learning Resources

1. Compare data on print and nonprint materials and their use.
2. Compare staffing and budget allocations.
3. Compare allocations for various activities with statewide standards and with allocations in other colleges.

Standard 7 - Physical Resources

1. Compare space allocations for programs and services with state standards and with allocations in other colleges.
2. Compare utility and maintenance costs with similar institutions.
3. Compare budgets for equipment replacement and the purchase of new equipment.

Standard 8 - Financial Resources

1. Compare revenue sources, unit costs for programs and services, and cost trends.
2. Compare operating reserves, including trends.
3. Compare trends in income and expenditures per ADA.

Standards 9 and 10 - Governance and Administration, System Relationships

1. Compare administrative staffing patterns.
2. Compare data on changes in board membership.

PROJECTED NEEDS AND PROGRAMS

A model for use by community colleges in projecting future conditions and the implied need for college programs and services will be designed and developed, using data illustrative of several regions in the state.

This planning model assumes that both societal needs and individual preferences are basic factors in assessing relevant future conditions. Consequently, plans

for college development should be oriented to expected future trends in (a) demographics, (b) societal conditions, (c) employment opportunities, (d) community interests, (e) plans of other organizations offering similar education, and (f) resulting levels and patterns of student demand.

Expected future trends in factors (a) through (e) can be projected using a variety of techniques and data sources. Among these sources are the 1980 census, data published by the Employment Development Department (EDD), and statewide data on college-going preferences collected by the Field Research Corporation in 1979. (The Field data were collected in conjunction with a Chancellor's Office Needs Assessment project. This project also produced a Needs Assessment Handbook which can be of use to colleges in determining short-term community preferences.)

Future trends in factor (f), the level and pattern of student demand, are a function of future institutional policies and relative costs as well as the other factors. Historic casual relationships influencing student demand will be identified for use in developing this phase of the model.

Trends in the six factors will be projected for 1985 and 1990. Next, a panel of community college planners will assess the implications of these projections for future college programs and services in each of several regions of the state. A variety of techniques will be used at this stage of model development, including the Delphi method and other forms of consensus building. From this work, statements of the likely character of need for community college programs and services will be developed for 1985 and 1990 in the several regions selected.

Projections are scheduled for completion by November 1982. The planning panel will be convenened in January 1983. The results of this effort and the procedures used to obtain these results (the planning model) will be disseminated in California and Hawaii workshops during the Spring 1983 and more widely following that time.

STATEWIDE PRIORITIES

At present, there are a multitude of state-level priorities for community college operations implicit in statute, regulations, and other legislative and executive pronouncements. Aside from rather general Board of Governors' goals, however, there is no one explicit or manageable set of statewide priorities against which community college operations may be evaluated and planned.

This effort would involve, first, the development of a limited number of statewide priorities for California community colleges. These priorities should be more specific than the 11 Board of Governors' goals, but not be objectives in the classic sense. That is, priorities should not necessarily be feasible or resource-constrained and, depending upon their specificity, they may not be time-constrained either. An initial set of statewide priorities would be endorsed by the Board after consultation with both state and local authorities.

A second part of this effort involves developing guidelines to be used by colleges in assessing their achievement of priorities. This set of guidelines may be added to the accrediting self-study kit and become a part of the self-

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study. Colleges undergoing self-study would address these priorities in addition to the accrediting standards. Achievement (or lack thereof) of a statewide priority would not bear upon a college's accreditation. Rather, these 20 (or so) college priority assessments would be aggregated each year without identifying specific colleges. Together with other evidence, this aggregation would be used by the Board of Governors and Chancellor's Office to make a comprehensive evaluation of the statewide achievement of community college priorities. This evaluation forms the basis as well for comprehensive planning by the Board and Chancellor's Office.

Thus, the priorities form a structure by which evaluation can then lead to more, fewer, but in any case modified (more specific, time-constrained, measureable, etc.) priorities. This exercise in reviewing priorities and assessing their feasibility will move colleges and the state Board into a planning mode in which long-term policies can be proposed and debated.

Initial priorities are scheduled for Board of Governors' endorsement by December 1982, following an extensive review by principal policymakers at both state and local levels. This timing would allow those colleges doing accreditation self-studies during 1982-83 to incorporate assessment of the statewide priorities into their work. Accreditation visits to these colleges are scheduled for 1983-84. Under this schedule, a first comprehensive evaluation can be completed in the Spring 1984.

CENSUS DATA

This effort is a two-part analysis to determine how 1980 Census data may be used in community college evaluation and planning.

The first part of this effort, already underway, is an analysis of how the 1980 Census questions may be applied to problems such as the evaluation of statewide priorities, comparative analyses by colleges, and projections of student demand. This work also will review the timing and means by which Census data may be obtained. At present, data for age, sex, race and ethnicity, and housing are available. Data on income and other factors, now included in Summary Tape File 3, will not be available until December 1982. Data can be obtained from several storage locations in California depending upon the kind of information sought.

The second part of this effort is to update the needed Census tract:district mapping. Census tracts for 1970 were identified with the community college districts that existed in 1970. Due to revisions in some tracts and some districts, this mapping must be corrected. This work will require about six months of (one FTE) staff time. Once completed, the mapping will facilitate the aggregation of Census data by district or by any other service area relevant to a particular college.

There also is a need to solve problems of Census data suppression in cases of sparsely populated areas. Data for tracts are routinely suppressed in instances where individuals might be identified. This is particularly troublesome for small district and small college attempts to aggregate tract data.

Work on the possible uses of Census data has begun and is scheduled for completion in July 1982. The update of Census tract:district mapping and

related activities will begin in August 1982 and be completed by December 1982.

OTHER DATA SOURCES

A variety of other data sources (primarily ad hoc studies) are to be analyzed
for their use in community college evaluation and planning.

Among the first sources to be examined are:

(a) the Statewide Longitudinal Survey (SLS), a two-year (Fall 1978 to
     Spring 1980) longitudinal review of 7,200 students in a stratified
     sample of 15 colleges, managed by a consortium under VEA funding;

(b) the Student Resources Survey (SRS), a cross-section survey of
     1,083 students in a stratified sample of 21 colleges, conducted
     by the College Board and the Chancellor's Office during
     December 1978;

(c) the Student Economics and Resources Survey (SEARS), a cross-
     section sample of 6,100 students drawn from 103 colleges,
     conducted by the College Board, Chancellor's Office, and Student
     Aid Commission between January and March, 1980.

Like the Census data, various surveys and other data sources will be reviewed
for their use in such activities as assessing statewide priorities, performing
comparative analyses for college self-studies, and various projections.

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Board of Governors of the
California Community Colleges
September 16-17, 1982

Title: Information System Plan

Staff Presentation: Chuck McIntyre
                                Director, of Analytical Studies

Summary

This Plan is presented for initial review and discussion by the Board,
after which further work will take place in consultation with both state
and local personnel. Following this work, the Board will be asked to
conduct a final review for endorsement of the Plan in December 1982.
Board endorsement of the Plan will allow staff to proceed to obtain the
necessary resources to implement the proposed system.

The Chancellor's Office Information System has evolved, since 1974, into
a group of eight files for which data are collected, stored, accessed,
and used by electronic data processing techniques. These files contain
current and historic cross-section data in unit record form for students,
staff, programs, courses, and facilities and more aggregate data on
finance, institutions, and communities. Data are processed both at
the state's Teale Data Center and in the Chancellor's Office using a
Four-Phase System (linked to Teale) with four terminals, a disc storage
device, and a printer.

The Information System now needs to be (1) refined, (2) augmented by
information for planning and evaluation, and (3) used more intensively
for policy analysis, management, and operations. This Plan addresses
these new developments and their implementation over the next four years.
While developments should enhance policymaking, they are not intended to
change either the locus (i.e., state versus local) of policymaking or
the specific conduct of policymaking.

The Plan will propose major changes in the collection and use of informa-
tion. These changes will require adjustments by districts that should,
after initial start-up costs, reduce costs over the long term. Changes
also will require added on-going expenditures for the Chancellor's
Office. Federal funds (through the FIPSE Project) will defray part of
the cost for planning and evaluation information. State funds will be
proposed to carry out the balance of the Plan.

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BACKGROUND

The need and basic design for a comprehensive information **system** within **the Chancellor's Office were** endorsed by the Board of **Governors** in 1974. When efforts to secure funding for the original three-year design in 1975-76 were unsuccessful the project was redesigned to span at least five **years** and project funding secured in 1976-77.

Project **design** specified that operational, as well as planning and analytical activities of the Chancellor's Office be supported by this information system. Since its inception, project staff have been organized as part of the Analytical Studies Unit within the Chancellor's Office.

SCOPE

The information system will ultimately include integrated data files in eight categories for use in both state and local decision-making. Systems files will contain information on (1) students, (2) courses, (3) programs, (4) facilities, (5) finance, (6) staff, (7) institution profiles, and (8) community. Except for the financial, institution, and community each data file consists of unit records, each unit record containing standard **basic data** elements relevant to that file. Student data, for example, **are** submitted in the form of one record for each student at a college containing those characteristics such as age, race, sex, residence, class load, and the like, which pertain to that individual.

The information system is a part of the Chancellor's Office total information environment. When the information system project was **initiated,** the automated Space Inventory system, developed by Facilties **Planning,** and other annual reporting systems and ad hoc surveys were **already** in existence. One major objective of the information system project is to develop automated procedures to coordinate, integrate, replace and/or eliminate as many of these separate reporting procedures as possible. It is recognized, however, that not all information needs of the Chancellor's Office can be satisfied by the information system. The need for ad hoc surveys and some annual reports will continue. As resources and time permit, information system data will be used to replace and/or eliminate as many surveys and reports as possible.

CONCEPTUAL DESIGN AND PHILOSOPHY

Unit record and data element concepts were selected for the system **because** of their simplicity and flexibility. These two basic concepts provide for multiple use of data, simplify reporting by reducing redundancy and duplication in data collection, stabilize reporting by

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reducing annual changes, and make sharing of transportable computer
programs a practical reality. The number of data elements maintained
for each unit record are held to an absolute minimum.

Data reporting by districts is less burdensome than under past proce-
dures where reports were constructed in their final form at the district
level. Changes in data requirements are easier to make on data elements
and unit records than on report formats. Reports are generated at the
state-level from data elements reported and submitted back to the
districts for verification. Chancellor's Office also is assuming
responsiblity to develop and maintain computer programs for many re-
quired state and federal reports.

Two basic ground-rules have been observed from the beginning of the
project. First, no district would be required to fundamentally change
its existing information system. Second, to the degree that resources
permit, the state-level system is designed to accomodate submission of
data on any medium, whether it be hard copy, cards, magnetic tape, or
teleprocessing.

STATE/LOCAL IMPACT

As noted, the information system does not require districts to change
their systems and allows for submission of data on several types of
media. Despite these ground-rules, introduction of the state-level
system may require significant one-time local investment and involve
changes to the systems of certain districts. The specific character of
these changes, however, may be determined locally and possible added
initial costs should be compensated by later savings.

More complete and valid data together with more efficient data pro-
cessing capability could result in at least two significant, but com-
pensating, influences on the balance of state and local prerogatives.
On the one hand, these conditions provide the basis for a more vigorous
state role and greater state-level controls which, if implemented, would
reduce local prerogatives. On the other hand, these conditions should
reduce the arbitrary element (arising from poor information) in state-
level decisions, thereby strengthening local prerogatives. In short,
the overall impact upon state and local decision-making is not entirely
certain. In any event, care must be taken to ensure that changes in the
information system do not cause changes in the character of decision-
making. The latter should be determined by other considerations of a
policy nature. The information system is simply a tool for decision-
making and should not dictate the way in which decisions are made or who
makes these decisions.

RELATIONSHIP TO OTHER SYSTEMS

Board policy calls for the Chancellor's Office to provide the focus for
gathering data from districts and disseminating these data to other

local, state, and federal agencies. Concentrating data gathering
through the Chancellor's Office information system simplifies the
numerous data reporting requirements faced by districts. Therefore,
it's essential that this system be linked in the appropriate fashion
with other federal and state data systems to avoid confusion and dup-
lication of effort.

Other data systems of primary concern are (a) federal reporting re-
quirements, including the Higher Education General Information Survey
administered by CPEC; (b) data collected by the California Postsecondary
Education Commission (CPEC) information system; (c) student data for
enrollment projections made by the State Department of Finance enroll-
ment projection model, and (d) occupational education, including federal
reporting requirements from the 1976 VEA and the supply component of the
California Occupational Information System (formerly the California
Manpower Management Information System). Continuing efforts identify
and implement ways of effectively coordinating the Chancellor's Office
system with each of these systems.

The general relationship of the Chancellor's Office information system,
to district information systems is defined gradually as each file of the
state-level system is implemented. Of particular importance, however,
are those districts that lack automated and/or general information
system capability. The need for uniform statewide reporting may place
an unexpected burden upon such districts. These problems are dealt with
individually as they occur.

CURRENT STATUS

Mapping 1980 census data to community college districts will complete
the development phase for the eight basic data files
Priorities now shift to operations and maintenance, improving the
quality of data, achieving 100% reporting, and direct use of data in
management, planning, policy analysis, and evaluation activities. The
quality of data will naturally improve as each system matures and local
districts see demonstrated uses of data that have direct impact upon
them. Improving the level of reporting will not occur without some
basic changes in the relationship of the Chancellor's Office and local
community colleges, however.

The Information System's success to date has been achieved through
voluntary compliance with reporting requirements. To the extent that
community college personnel perceived some benefits and/or lessening of
reporting burdens inherent in the unit record systems, they have actively
cooperated in the design and implementation of reporting procedures and
have voluntarily complied with reporting requirements. Staff has been
very successful in getting all districts to report unit record data.
However, there has been less success in getting 100% compliance with
reporting requirements. Complete reporting for noncredit students and
courses continues to be a problem. A number of districts still do not
report unit record data on noncredit students and courses.

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As the fiscal impact of Proposition 13 increases for community colleges and current economic conditions continue, state and federal reporting becomes an increasing burden. Local districts are forced to prioritize their resources and there is increasing evidence that nonmandated reporting is assigned a lower priority. It will be very difficult to get local districts to continue to invest in the development of new automated systems for nonmandated reporting. As a result, improvements in noncredit student and course reporting do not appear likely nor is there likely to be the same degree of voluntary cooperation as in the past.

NEXT STEPS (THE PLAN)

MANDATES AND SANCTIONS

Reporting requirements must be directly or indirectly mandated with reasonable sanctions for noncompliance. Continued reliance on voluntary reporting will result in reduced quality of data and level of compliance as fiscal constraints continue to erode district's ability, or willingness, to respond to nonmandated reporting requirements. This will in turn decrease our ability to respond to inquiries from the legislature and control agencies and increase their criticism of our ability to collect required information from our colleges. If this situation is allowed to continue, we can expect gradual loss of administrative authority as state control agencies and the legislature seek compliance to information requests through legislation and/or budget control language.

To mandate data reporting with unrelated fiscal sanctions for noncompliance seems heavy handed and arbitrary. Usefullness of mandated data rust be demonstrable and sanctions for noncompliance should be directly related to the act of noncompliance. It would be better to indirectly mandate data reporting through use of reported data in agency operations that provide services or financial support directly to college districts. Withholding service or financial support for noncompliance to reporting would then relate sanctions directly to the data required. For example, student data would be used in the general fund apportionment process and course data in the program/course approval procedures.

APPLICATIONS

To make data reporting more palatable for colleges, we propose that data collected not only provide requested information to the Legislature and CPEC, and meet all required state and federal reporting but also are directly applied to those mandated functions of the Board of Governors and Chancellor's Office that provide a service or provide financial support to local districts.

MANAGEMENT AND OPERAT!ON

One of the primary responsiblities of the Chancellor's Office is the administration of state general fund apportionment and allocation of categorical funds (EOPS, HSPS, VOC. ED.). Separate reporting procedures are currently used to collect data from colleges to support apportionments and allocation procedures. The data required for allocation and apportionment formulas are reported by colleges through information systems data reporting on contact hours and enrollment. These separate reporting procedures could be replaced with a single integrated reporting system.

We are now prepared to take this step. With the passage of recent legislation (AB 1149) requiring changes in attendance accounting, increasing emphasis on accountability, and the issue of state support for instructional activity, it is time proceed with this next phase of the information systems project. We recommend that all of the separate reporting required for general fund apportionment and categorical fund allocations be discontinued and replaced by a single integrated student and course reporting system.

PLANNING, POLICY ANALYSIS, AND EVALUATION

The existing Information System collects cross-section data on programs, students, courses and finance. While these data are useful for policy analysis, the system does not automatically generate the kinds of comparative data, projections, logitudinal data, and qualitative assessments that are needed for planning and evaluation. Data ar needed to assess student motivation, performance, education progress nd outcome. The student and course reporting system proposed above can also be structured to provide information for these purposes. In addition, the joint project of the Chancellor's Office and the Accrediting Commission, supported by the Federal Fund for Improvement of Postsecondary Education (FIPSE), will identify cost-effective ways of securing and using such information.

REFINEMENTS

Effective application of information system data to Chancellor's Office operations will require technical, organizational, policy, and budgetary changes. Several data elements will require refinement, new data elements will be required, and timing of data reporting must be revised to allow computation of attendance and assessment of student intent, progress and performance. Successful integration of information systems data and activities into Chancellor's Office line operations will require careful delineation and agreement of unit responsibilities. Additional staff and operating funds will be necessary to collect, process, and integrate information systems data into Chancellor's Office operations in an

effective and timely manner. Finally, to assure compliance with report-
ing requirements and reliability of data reported, Title 5 regulations
should specify use of information systems data for mandated functions of
the Chancellor's Office, and reasonable sanctions for noncompliance must
also be instituted that relate directly to reporting requirements.

Technical Changes

Successful application of information systems data to Chancellor's
Office line operations will require the following technical changes:

1. Discontinue annual and winter/spring first census week student data
    reporting. In their place institute term end student data reporting
    with the following changes;

    a. Require a unique but anonymous record number, to be assigned
        by the college district, for each student enrolled to permit
        longitudinal tracking of students through the institution;

    b. Require section identifier, units (if credit class), contact
        or attendance hours, and completion status for each class in
        which the student is enrolled; and

    c. Require academic standing, grade point average (GPA), and
        educational outcome for each student.

2. Remove financial aid data elements from EOPS student data record,
    implement a separate student financial aid reporting procedure and
    require financial aid data for all financial aid students.

3. Expand the Student Accountability Model (SAM) to include nonvoca-
    tional instructional programs, refine and require reporting of
    student declared educational goal, implement a student program
    analysis process (modeled after SAM) in the Chancellor's Office,
    and discontinue vocational educational student data reporting for
    college districts.

4. Require term end rather than annual reporting of EOPS and Handicapped
    student data.

5. Add course classification data elements to the Course Activity
    Measures (CAM) data system.

Organizational Changes

Reliance of Chancellor's Office line operations on information systems
data will require thoughtful delineation of responsibilities and close
coordination of unit priorities and resources. To date, line units and

the information systems project have functioned independently and coordination of activities was not necessary. However, this situation will change dramatically under the new proposed procedures.

Under current practices, line units have direct control over data collection and processing validation since data are reported directly to them from the responsible unit in the local college district. Followup for data errors and noncompliance naturally flow from this process and questions of responsibility and priority are never at issue. However, under the proposed system, this traditional flow of data will be modified at the state level and possibly at the local level. Data will not flow directly from the responsible local unit to a line unit within the Chancellor's Office. The proposed automated system will require that data flow through a third party, in this case data processing, and be processed before data are useable by the line unit. Without careful planning, third party involvement can lead to questions about responsibilities and priorities.

Under the proposed system, only the responsibility for physical receipt and processing of data into a useable format are being transferred to the information system. Administration of reporting requirements and schedules, reporting, compliance, verification of reported data, and followup responsibilities remain with the line unit. Conversely, the information system must guarantee timely processing of data, availability and access to useable information, and technical assistance.

Of equal importance is the provision of adequate staff and resources to provide a level of information service that will guarantee access to information for all agency units. Present staffing and funding is sufficient only for maintenance and operation of data processing systems currently in place. Effective integration of information systems into the management, operation, planning and evaluation functions of the Chancellor's Office will require additional staff and resources to provide service and assistance to line units. EDP equipment will need to be upgraded to allow hands-on access to information systems data and data processing facilities by Chancellor's Office staff. Only by providing service and assistance, and allowing staff hands-on access will data processing be a useful tool.

April 1983

DATA FILES	STATUS	NUMBER OF DISTRICTS REPORTING						
		1976-77	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83
1. Student Data								
.First Census Enrollment	oper		59	64	67	67	70	70
.Vocational Student Enrollment	oper				16	32	32	
.EOP&S Student Data	oper					65		
.HSP&S Student Data	1st yr							
2. Staff Data	oper						69	70
3. Course Data								
.Course Activity Measures	oper	26	46	65	66	67	68	
.Noncredit Inventory	oper							
.Independent Studies Inventory	oper							
4. Program Inventory	oper		70	70	70	70	70	70
5. Facilities Data								
.Space Inventory	oper	70	70	70	70	70	70	70
.Off-Campus Facilities	study							
6. Financial Data								
.Apportionment Data	oper	70	70	70	70	70	70	70
.Income and Expenditure Data	oper			70	70	70	70	
.Expenditures by Activity	oper				70	70	70	
7. Community Data	develop							
8. District/College Profiles								
.Students	oper			70	70	70	70	70
.Staff	oper						70	70
.Courses	develop							
9. Policy and Legal Codes								
.State Education Code	discontinued							
.Administrative Code	discontinued							
d Policy	study							

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GLOBAL DATA ELEMENTS

COLLEGE CODE X1
DISTRICT CODE X2
RECORD NUMBER X3
REPORT PERIOD X4
TAXONOMY OF PROGRAMS CODE (TOP) X5
USOE CODE X6

CENSUS STUDENT DATA ELEMENTS

BIRTHDATE S01
CITIZENSHIP CODE S02
COLLEGE OF LAST ATTENDANCE S03
ENROLLMENT STATUS S04
HIGH SCHOOL EDUCATION S05
HIGH SCHOOL OF GRADUATION OR LAST ATTENDANCE S06
POSITIVE ATTENDANCE ENROLLMENT S07
RACIAL AND ETHNIC CODE 508
RESIDENCE CODE S09
SEX S10
STUDENT-DECLARED MAJOR S11
STUDENT GOAL S12
STUDENT LEVEL S13
TOTAL POTENTIAL HOURS OF ATTENDANCE (TPHA) S14
UNITS ATTEMPTED S15
VETERAN'S AID STATUS S16
WEEKLY STUDENT CONTACT HOURS (WSCH) S17

COMPUTED STUDENT DATA ELEMENTS

AGE SE1
CREDIT/NONCREDIT STATUS SE2
ENROLLMENT PATTERN SE3
FULL-TIME/PART-TIME STATUS SE4
ITV STATUS SE5
RESIDENCE STATUS SE6
TOTAL UNITS ATTEMPTED SE7

VOCATIONAL STUDENT DATA ELEMENTS

COOPERATIVE EDUCATION STATUS V01
CONSUMER HOMEMAKING EDUCATION PROGRAM CODE V02
INSTRUCTIONAL SETTING, ACADEMICALLY DISADVANTAGED . . . V03
INSTRUCTIONAL SETTING, ECONOMICALLY DISADVANTAGED . . . V04
INSTRUCTIONAL SETTING, HANDICAPPED STUDENT V05
INSTRUCTIONAL SETTING, LIMITED ENGLISH PROFICIENCY . . V06
SAM COMPLETION STATUS V07
SAM STUDENT MAJOR CLASSIFICATION V08
SAM VOCATIONAL PROGRAM CODE V09
VEA FUNDING FOR DISADVANTAGED STUDENT V10
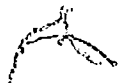
EOPS STUDENT DATA ELEMENTS

ACADEMIC STANDING, BEGINNING E01
ACADEMIC STANDING, END E02
CAL GRANT B E03
COUNSELING HOURS E04
CUMULATIVE GPA E05
EOPS GRANT. E06
EOPS STATUS E07
EOPS WORK-STUDY MONEY EARNED E08
GPA FOR ACADEMIC YEAR E09
NATIONAL DIRECT STUDENT LOAN (NDSL) E10
NON-EOPS WORK-STUDY MONEY EARNED E11
OTHER FINANCIAL AID E12
PELL GRANT E13
PELL GRANT ELIGIBILITY STATUS E14
SCHOLARSHIP E15
SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANT (SEOG) . . . E16
TOTAL FINANCIAL NEED E17
TOTAL WORK-STUDY HOURS WORKED E18
TUTORIAL HOURS E19
UNIT COMPLETED E20

HANDICAPPED STUDENT DATA ELEMENTS

AGE AT ONSET H1
DEPARTMENT OF REHABILITATION CLIENT H2
DISABILITY AND SERVICE CLASSIFICATION H3
FINANCIAL AID STATUS H4
HSPS STATUS H5
INSTRUCTIONAL SETTING H6
INSTRUCTIONAL SETTING, OFF CAMPUS H7
SERVICES REQUESTED OR USED H8
UNITS COMPLETED H9

DATA ELEMENTS   ELEMENT NO.   PAGE 3

STAFF DATA ELEMENTS

ACTUAL ANNUAL SALARY, PRECEDING YEAR SF01
ADDITIONAL TIME-ON-CAMPUS SF02
ANNUAL SALARY SF03
ANNUAL STIPEND SF04
ASSIGNMENT FTE SF05
AVERAGE HOURLY EQUIVALENT COMPENSATION SF06
AVERAGE HOURLY EQUIVALENT COMPENSATION,
  CERTIFICATED ASSIGNMENT FOR CLASSIFIED EMPLOYEE . . . SF07
AVERAGE HOURLY OVERLOAD COMPENSATION SF08
EEO-6 OCCUPATIONAL ACTIVITY SF09
EMPLOYEE CODE SF10
EMPLOYMENT CLASSIFICATION SF11
EMPLOYMENT STATUS SF12
FUNDING SOURCE SF13
MONTHS OF EMPLOYMENT SF14
RACIAL & ETHNIC BACKGROUND SF15
REQUIRED OFFICE HOURS SF16
SEX SF17
TOP OR CSS CODE SF18
TYPE ASSIGNMENT SF19
VEA ASSIGNMENT SF20
WEEKLY HOURS SF21
YEAR OF BIRTH SF22

COURSE ACTIVITY DATA ELEMENTS

ACTIVE ENROLLMENT-FIRST CENSUS C01
ACTIVE ENROLLMENT-SECOND CENSUS C02
COURSE IDENTIFIER C03
CREDIT-NONCREDIT C04
DAY-EVENING CLASS CODE C05
METHOD OF INSTRUCTION C06
SAM PRIORITY CODE C07
SECTION DATE-BEGINNING C08
SECTION DATE-ENDING C09
SECTION ENROLLMENT ACCOUNTING METHOD C10
SECTION IDENTIFIER C11
SECITON MEETING DAYS. C12
SECTION MEETING FACILITY-BUILDING C13
SECTION MEETING FACILITY-LOCATION C14
SECTION MEETING FACILITY-ROOM C15
SECTION MEETING TIME-BEGINNING C16
SECTION MEETING TIME-ENDING C17
TOTAL SECTION CONTACT HOURS C18
TOTAL STUDENT CONTACT HOURS C19
UNITS OF CREDIT C20

NONCREDIT/INDEPENDENT STUDY COURSE INVENTORY

APPLICATION DATE N01
APPROVAL REQUEST N02
CERTIFICATION CODE N03
CLASS ROOM HOURS N04
COURSE ACTIVITY CODE N05
COURSE OBJECTIVE N06
COURSE TITLE N07
DEMONSTRATION OF NEED N08
METHOD OF INSTRUCTIONS N09
MINIMUM SESSIONS N10
PRIMARY METHOD OF COURSE EVALUATION N11
RAVEC CERTIFICATION N12
SAM PRIORITY CODE N13
SPECIAL PROGRAM CODE N14
TEACHING MATERIALS N15
TYPE NONCREDIT COURSE N16
UNITS N17

PROGRAM INVENTORY

CONJOINT PROGRAM P1
DEGREE TYPE P2
LOCAL PROGRAM TITLE P3
NONCREDIT PROGRAM P4
OCCUPATIONAL PROGRAM P5
UNITS REQUIRED FOR DEGREE P6
YEAR APPROVED P7
YEAR DELETED P8
YEAR OPERATIONAL P9

FACILITIES INVENTORY

ASSIGNABLE SPACE, ROOM F01
A-Z PRORATION CODE F02
BUILDING NAME F03
BUILDING NAME ABBREVEATION F04
BUILDING NUMBER F05
CONDITION CODE F06
CONSTRUCTION TYPE F07
DEPARTMENT CODE F08
GROSS SQ. FT., BUILDING F09
LOCATION CODE F10
MASTER PLAN TYPE F11
NUMBER OF ASSIGNABLE STATIONS F12
OWNERSHIP CODE F13
ROOM NUMBER F14
ROOM USE CODE F15
TOP OR CSS CODE F16
YEAR OF CONSTRUCTION F17
OF LAST MAJOR ADDITION F18